



California Public Employees' Retirement System

California Public Divest from Iran Act Annual Legislative Report

December 31, 2011



**California Public Employees' Retirement System
Iran Related Investments – Fourth Annual Legislative Report
December 31, 2011**

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Executive Summary

1. This Legislative Report sets out CalPERS implementation of the Iran Act during 2011. This requires that CalPERS identify, monitor, and ultimately divest from companies in the international nuclear, defense, oil and gas sectors, subject to the plan's fiduciary duty which requires that risks and returns take primacy.
2. Since the 2010 Legislative Report was filed, CalPERS has continued to actively engage companies as required by the Iran Act.
3. During the period covered, a number of companies announced they were curtailing their activities in Iran, or were making significant progress towards this.
4. During the period covered, CalPERS divested from four companies operating in Iran that failed to take substantial action as defined by the Iran Act: CNOOC Ltd., Daelim Industrial Limited, Edison Spa, PTT Public Company. New investments in these companies will be blocked as well. The decision to divest these companies was taken by the CalPERS Investment Committee following a detailed process of identification, engagement and fiduciary analysis by CalPERS staff in compliance with the Iran Act. At earlier stages in CalPERS compliance with the Iran Act, the fiduciary analysis concluded that divestment would subject the fund to additional risk and costs. As the number of companies subject to the Iran Act has diminished, so too have the potential risk and costs of divestment. This enabled the Investment Committee to conclude that CalPERS could now divest these shares without breaching its fiduciary obligations.
5. CalPERS continues to identify companies potentially subject to the Iran Act, to notify them of the law's provisions, and call for their withdrawal from Iran.

Introduction

This fourth report to the California Legislature is provided by the California Public Employees' Retirement System (CalPERS) under the requirements of Government Code sections 7513.7 and 16642, commonly known as the California Public Divest from Iran Act (Iran Act).

CalPERS is the largest public pension plan in the United States, responsible for over \$228 billion in global assets, which are invested to provide retirement and health benefits for over 1.6 million Californians. The CalPERS Board has sole and exclusive responsibility to administer the system in a manner that will assure prompt delivery of benefits to its participants and their beneficiaries. The assets of the system are trust funds that must be held for the exclusive purpose of providing benefits to participants in the retirement system and their beneficiaries and defraying the reasonable expenses of administering the system.

Implementation of the Iran Act

CalPERS has diligently and comprehensively implemented the requirements of the Iran Act throughout the reporting period and from the time the legislation became effective on January 1, 2008.

The CalPERS Board, senior management and staff continue to devote significant time and attention to ensuring that the provisions of the Iran Act are fully implemented. The issue is continually kept under close review by the CalPERS Senior Executive Corporate Governance Working Group, which includes the President of the Board of Administration, the Chief Executive Officer, the Chief Investment Officer, the Chief Operating Investment Officer, General Counsel, and heads of Government Affairs, External Affairs and Corporate Governance.

This report charts further significant progress towards meeting the objectives of the Iran Act, which are to ensure that companies in relevant sectors curtail or cease business operations in the country, unless the companies are considered exempt on humanitarian grounds. The details are set out in the tables which follow.

Examples of major multinationals which withdrew from Iran over the last two years include Royal Dutch Shell, which announced that it has agreed to terminate its investments and avoid any new activity in Iran's energy sector in full compliance with the newly expanded U.S. legislation. Likewise, France's Total SA, Norway's Statoil ASA, Brazil's Petrobras and Italy's Eni Spa have also agreed to end all investments in Iran. In October of 2011, it was reported that operating contracts with Russia's Gazprom Neft were replaced by domestic Iranian companies. CalPERS has been calling for withdrawal by these companies since the inception of the Iran Act, and has actively engaged their

senior management and Boards through correspondence and in person meetings.

Requirements of the Iran Act

The Iran Act sets out a number of requirements, as follows:

The legislation requires that CalPERS identify companies with business operations in Iran, as defined in the Iran Act, or that provide revenue to the government of Iran.

Under the Iran Act, a company has business operations in Iran if the company meets either of the following criteria:

1. The company (A) is invested in or engaged in business operations with entities in the defense or nuclear sectors of Iran or (B) is invested in or engaged in business operations with entities involved in the development of petroleum or natural gas resources of Iran, and that company is subject to sanctions under Public Law 104-172 (any entity that has invested at least \$20 million in any year since 1996 to develop petroleum or natural gas resources of Iran), as renewed and amended in 2001 and 2006.
2. The company has demonstrated complicity with an Iranian organization that has been labeled as a terrorist organization by the United States government. (Gov. Code §7513.7(b).)

“Business operations” is defined in the Iran Act to mean “maintaining, selling, or leasing equipment, facilities, personnel, or any other apparatus of business or commerce in Iran, including the ownership or possession of real or personal property located in Iran.” (Gov. Code §7513.7(a)(2).)

Identification

The process for researching and identifying the companies that have business operations in Iran has been developed with great care and attention to detail. For this report, CalPERS utilized external third party resources including the U.S. Government Accountability Office (GAO) report on Iran sanctions for the initial identification of companies subject to the Iran Act.

Notification

Once identified, CalPERS has provided timely and full notification to each company, setting out the provisions of the Iran Act, and seeking a substantial response which can be properly assessed.

To ensure the highest level of engagement, letters have been couriered to the most senior board member of each company, for example, the Chairman, CEO or President. The critical provisions are those in the Iran Act that relate to exemption through boycotting the government, curtailing business, and selling company assets, equipment and property. CalPERS has also carefully considered petitions for exclusion on grounds of humanitarian activity and ensured that the intention of the Act has been firmly applied.

Staff actively pursue a substantive response to these corporate engagements, for example by identifying parent companies where decisions will be made, and if need be, making use of translating services to ensure clear communication.

Determination

Following the communication with identified companies, staff make a determination of the companies' status under the Iran Act. The company's response is analyzed by CalPERS staff to determine the applicability of the Iran Act's provisions. Where company activity is deemed to be subject to the Iran Act, the determination includes an assessment of whether the company is taking substantial action to withdraw, or making substantial progress towards this. An additional consideration is whether a company is exempt on humanitarian grounds.

In its commitment to fulfill the provisions of the Iran Act, CalPERS has worked diligently as an individual investor and collaboratively with CalSTRS to go beyond letter writing. Engagement with companies is carried out at the highest level.

Divestment Policy

The CalPERS Investment Committee has adopted a specific policy on the topic of divestment. This policy builds on the concepts of fiduciary duty and some of the possible implications of divestment on these responsibilities. The policy defines instances when CalPERS will undertake divestment as follows:

1. CalPERS will sell targeted company investments or refrain from making them to the extent investment in the targeted company is imprudent and inconsistent with fiduciary duties.
2. CalPERS will comply with federal laws requiring divesting, if any.
3. To the extent required by law and consistent with fiduciary duties, CalPERS will comply with constitutional California state laws that require divesting.

Fiduciary analysis

The Iran Act requires that CalPERS divest its shares in those companies that have not provided evidence of exemption from the Iran Act's provision, within 90 days of being notified. However, the Iran Act specifies that this does not "require the board to take action as described...unless the board determines, in good faith, that the action...is consistent with the fiduciary responsibilities of the board as described in Section 17 of Article XVI of the California Constitution." (Gov Code §7513.7(k).)

Hence, the Iran Act requires that divestment be carried out consistent with the California Constitution which determines that the boards of CalPERS and CalSTRS to execute their actions with a singular focus on the purpose of providing benefits to participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system.

Upon the determination that companies are subject to the divestment provisions of the Iran Act, detailed analysis of the potential risk and return impact of divestment has been completed. This type of fiduciary analysis has been completed regularly by both internal CalPERS staff and independent external consultants.

The most recent version of the fiduciary analysis was completed in March 2011 by Wilshire Associates (Attachment 1), CalPERS general pension consultant. This analysis contemplated the divestment impact of eight companies doing business in Iran (five companies) and Sudan (three companies) valued at approximately \$160 million. CalPERS once had up to \$2 billion invested in 47 companies believed to be potentially conducting business operations in the two countries targeted by California divestment laws.

Following this review, it was determined that removal of the now relatively small positions in four companies from CalPERS portfolio that were deemed unresponsive or failed to take substantial action pursuant to the Iran Act would not have a material impact on CalPERS objective to achieve long-term, sustainable, risk adjusted returns. A fifth company was approved for divestment by CalPERS; however, it was subsequently determined that this company was no longer subject to the Iran Act.

In prior years, CalPERS fiduciary analysis indicated that significant explicit trading costs would be incurred if CalPERS were to divest its holdings in companies subject to the Iran Act and that the resulting portfolio would have an increased level of risk relative to the underlying FTSE All World, All Capitalization benchmark used within the CalPERS global equity portfolio. Based on this review of the potential cost and risk impact of divestment and an analysis of its fiduciary responsibilities, CalPERS did not divest.

Liquidation

The Iran Act requires the sale of any investments in companies subject to divestment within an 18 month time period from the point of such determination. CalPERS has completed liquidation of four companies subject to the Iran Act in 2011.

Reporting Requirement of Section 7513.7(i)(3) – Whether the Board has Reduced its Investments in any Companies Described in Section 7513.7(b) (“Covered Companies”)

CalPERS has fully divested from four companies which continue to have business activities in Iran and were unresponsive to CalPERS engagement: CNOOC Ltd., Daelim Industrial, Edison SPA, PTT Public Company.

Reporting Requirements of Section 7513.7(i)(6) – Detailed Summary of Investments Transferred to Funds or Accounts Devoid of Companies with Business Operations in Iran as Described in Section 7513.7(f)

CalPERS investment activity in the types of fund structures referenced in section 7513.7(f)(1)(2)(3) do not contain exposure to companies with Iran business operations to the best of its knowledge. No transfers have been made to different fund or account structures.

Progress on Company Withdrawal from Iran

The table that follows sets forth CalPERS current investment holdings in the non-US companies that have been identified as having business operations in Iran, as defined by the legislation.

The progress on company withdrawal from Iran or exemption from the Iran Act is as follows:

1. (Table 1) CalPERS has divested from 4 companies pursuant to the Iran Act.
2. (Table 2) CalPERS holds portfolio positions in 5 companies that are under review as potentially subject to the Iran Act.
3. (Table 3) CalPERS holds portfolio positions in 14 companies that continue to be monitored regarding Iran activity, if any.

Conclusion

CalPERS continues to diligently implement the requirements of the Iran Act. Through this process CalPERS has tracked significant progress in company withdrawal and reduction of activity in Iran. In part, this reflects the growing geopolitical risk in the country, but it also demonstrates a positive response to active shareowner engagement and economic sanctions.

CalPERS will continue to identify, monitor, engage with companies in the portfolio and review their status under the Iran Act. Companies continue to withdraw, curtail operations or simply run down contracts in order to receive payments due to them from the Iranian government. Others are deciding to not proceed with planned investments, even where this allows competitors to step in.

It is clear that the situation is changing rapidly; however, CalPERS will ensure its commitment to diligent compliance with this legislation will continue, that the Board is kept fully apprised of developments, and that staff are positioned to review our response as required.

TABLE 1:
4 Companies Divested Pursuant to the Iran Act

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
1	CNOOC Ltd. (Hong Kong)	<p>CNOOC Ltd. is a listed subsidiary of China National Offshore Oil Corp. (CNOOC) which is 70-percent owned by the Government of the People's Republic of China. CNOOC Ltd. itself does not have operations in Iran. Parent company CNOOC has stated that its affiliates or subsidiaries can be involved in restricted countries by the United States Sanctions Acts and State-level legislations.</p> <p>In March 2009, Iran's oil ministry stated that CNOOC had reached a deal to develop the North Pars gas field in the Persian Gulf (NP). CNOOC is reportedly expected to invest USD5 billion in upstream gas projects, and USD11 billion in gas liquefaction (downstream) facilities, until 2012. Iran and CNOOC had already signed a Memorandum of Understanding in 2006 for gas supply from Iran to China. In July 2009, CNOOC was reported by the Iranian Offshore Oil Company's managing director to have signed a cooperation agreement with Malaysia-based Amona for the development of Resalat oilfield.</p> <p>In its 2009 form 20-F, issued in April 2010, CNOOC Ltd. stated that the company is possibly subject to United States sanctions, as a result of "current or future activities by CNOOC Ltd. or its affiliates in countries that are the subject of U.S. sanctions such as Iran and Sudan".</p>	In May 2011, the CalPERS Investment Committee approved divestment of shares in CNOOC Ltd. The company, through its parent company, has failed to take substantial action to curtail business operations in Iran.	0	0
2	Daelim Industrial Co. (Korea)	<p>Daelim Industrial Co.'s website lists several offices in Iran, where the company is active. Currently, Daelim Industrial is collaborating with Iranian companies to upgrade the Esfahan refinery in Iran. In addition, it has secured a deal to build liquefied natural gas and liquefied petroleum gas tanks in Tombak, located in southern Iran. The Esfahan refinery project, which is to be completed in 2011, aims to give Iran more refining ability so that it no longer needs to import fuel.</p> <p>In 2009, it was reported that Daelim has secured a deal to build storage tanks, provide a fully integrated communication solution to equipment for an onshore gas plant and three offshore platforms of the South Pars gas field in Iran, and construct a gas refinery and an ethyl benzene plant in Iran.</p> <p>The company's 2008 Annual Report listed the following projects in progress in</p>	In May 2011, the CalPERS Investment Committee approved divestment of shares in Daelim Industrial Co. The company has been unresponsive to CalPERS request to take substantial action to curtail business operations in Iran.	0	0

TABLE 1:
4 Companies Divested Pursuant to the Iran Act

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
		Iran: LNG & LPG Tank (2007-2011), Esfahan Refinery Upgrading Project (2007-2012) and AKPC LDPE Project (2005-2009). Daelim is carrying out the construction of a total of five LNG and LPG storage tanks on a turnkey basis in association with local contractor Ghorb Nooh. The client is National Iranian Oil Company, and the work is valued at USD 320 million.			
3	Edison Spa (Italy)	As of September 2010, Italy-based Edison is involved in Iran through a four-year exploration deal signed in January 2008, regarding the offshore oil and gas block Dayyer, tendered by the state-owned National Iranian Oil Company (NIOC). The exploration contract signed between Edison and the NIOC for the Dayyer block envisages an exploration period of four years, during which studies will be made, seismic data will be acquired and processed, and one exploration well will be drilled. Investments will be approximately EUR 30 million (USD 40 million) in total. If reserves are discovered, Edison will directly enter the development phase.	In May 2011, the CalPERS Investment Committee approved divestment of shares in Edison Spa. The company confirms operations in Iran exceed the \$20 million investment threshold pursuant to the Iran Act and subsequently failed to take substantial action to curtail business operations in Iran.	0	0
4	PTT Public Company Ltd. (Thailand)	PTT Public Company Limited is the parent company of PTT Exploration and Production Pcl (PTTEP), and PTT Chemical Public Co (PTTCH), both of which are involved in Iran. In 2010, PTTEP Iran conducted a feasibility study and post-well evaluation in the Saveh Block. As of 2010, PTTCH holds a 10% stake in MEHR Petrochemical, an Iranian petrochemicals plant with high density polyethylene production capacity. PTTCH has no intention to increase its stake in MEHR. In correspondence dated July 2010, the Company confirmed operations in Iran within the parent company (PTT) and the subsidiaries PTTEP & PTTCH. In addition, the Company exceeds the \$20 million dollar investment threshold.	In May 2011, the CalPERS Investment Committee approved divestment of shares in PTT Public Company Ltd. The company, through its subsidiaries, has failed to take substantial action to curtail business operations in Iran.	0	0
			Category Total	0	0

TABLE 2:
5 Companies Under Review

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
1	Hyundai Heavy Industries (South Korea)	HHI owns a controlling stake in the Hyundai Corporation, a general trading company specializing in a wide variety of shipping, industrial, chemical, and electrical products. Hyundai Corp signed a \$1.9 billion contract to provide Iran with materials “in the fields of shipbuilding, machinery, steel & metal, chemicals, home appliances, etc.” HHI has received numerous contracts to provide manufactured goods to Iran over the past six years. As of 2010, HHI has ties to Iran through the supply of equipment for facilities and the delivery of ships and tankers to Iran state-owned companies. The U.S. Government Accountability Office reported in April 2010 that the company had special investments in Iran's energy sector between 2005 and 2009.	CalPERS initiated engagement with Hyundai Heavy Industries in 2011. Response from the Company is pending.	172,350	\$47,045,547
2	Maire Tecnimont (Italy)	Subsidiary company Tecnimont KT was hired as a contractor by the National Iranian Oil Refining and Distribution Company to expand their Arak refinery, the largest in the Middle East. The expansion allowed the refinery's capacity to increase to 100,000 barrels per day. Iran Branch Office (Company Website) "Maire Tecnimont S.p.A. has received a Letter of Intent from Petropars Ltd. (“PPL”), a company owned by Naftiran Intertrade Company (“NICO”) which is a subsidiary of National Iranian Oil Company (“NIOC”), for work related to an integrated Gas Treatment Plant in Tombak (Iran). This work will be executed by a consortium formed by Tecnimont S.p.A. and the Iranian companies Nargan, Dorriz and Gamma. The cost is estimated to be approximately €1.3 billion, while Tecnimont’s scope of work will include overall project management, engineering, procurement services and construction assistance for a total amount exceeding €200 million. The Contract is expected to be signed in July 2009 and its completion is expected end of 2012." (Company Press Release, 6/9/2009)	CalPERS initiated engagement with Maire Tecnimont in 2011. Response from the Company is pending.	414,450	\$693,690
3	Oil India	According to the company's 2009 annual report, Oil India has an exploration service contract in the Farsi Oil Block. The company, along	CalPERS initiated engagement with Oil India in 2011. Response from the Company is pending.	150,219	\$4,010,056

TABLE 2:
5 Companies Under Review

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
	(India)	with its partners ONGC Videsh (OVL) and Oil India Corporation (OIC) holds interest in the Farsi oil field. As of 2010, Oil India Limited (OIL) is involved in Iran's petroleum sector through its interest in the Farsi gas block. The US administration had in May 2010 named Oil India Ltd among the 41 firms worldwide having energy ties with Iran, an act for which it may impose sanctions on them." (Economic Times, "Oil PSUs to seek legal opinion of impact of sanctions on Iran," July 22, 2010).			
4	Petronet LNG (India)	<p>According to an Indian news agency, Petronet signed a Memorandum of Understanding in December 2009 to develop South Pars phase 12 and support Iran's building of a new LNG plant. Petronet holds a 20% stake in a consortium that includes ONGC Videsh (OVL) and the Hinduja Group (PTI, December 2, 2009). According to an Indian news service, the plant is being built by Iran LNG Co., a subsidiary of the National Iranian Oil Company (NIOC), at Tombak Port in Iran. As of November 2009, the plant was 25% complete and is expected to become operational in 2011 (Express India, November 16, 2009).</p> <p>The US administration had in May named Petronet LNG among the 41 firms worldwide having energy ties with Iran, an act for which it may impose sanctions on them. (Indian Express, "Oil PSUs seeking legal opinion on sanctions," 7/22/2010)</p>	CalPERS initiated engagement with Petronet LNG in 2011. Response from the Company is pending.	77,051	\$256,336
5	Polskie Gornictwo Naftowe i Gazownictwo (PGNiG) (Poland)	In 2008, Polskie Gornictwo Naftowe i Gazownictwo (PGNiG) held preliminary talks "with Iran's Offshore Oil Company to cooperate on managing already-discovered gas reserves" in the Lavan gas field, for a contract worth \$2 billion (Reuters, August 18, 2009 & Mehr News Agency, June 28, 2008). According to the firm's website, PGNiG signed a letter of intent in February 2008 (PGNiG Website, April 7, 2009). The current status of the project is unknown.	CalPERS initiated engagement with PGNiG in 2011. Response from the Company is pending.	5,224,017	\$6,633,938
			Category Total	6,038,087	\$58,639,567

TABLE 3:
14 Companies Being Monitored

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
1	Air Liquide (France)	<p>Air Liquide has an office in Tehran, Iran.</p> <p>Air Liquide acquired Lurgi from GEA Group in July 2007. Lurgi has been involved in four large petrochemical projects there, valued at approximately USD750 million. Lurgi's business activities in Iran had accounted for up to 20 percent of its total sales before the acquisition by L'Air Liquide. Moreover, l'Air Liquide Group owns two brands: Saf-Fro and Oerlikon, whose commercial managers are based in Iran. The company confirmed that, further than through Lurgi, it sells, through distributors, some welding consumables and some healthcare products in the country. The total group revenue from Iran in 2009 amounted to EUR 20 million (USD28.66 million), corresponding to 0.17percent of Air Liquide's annual revenue.</p> <p>In February 2010, the company was reported to have delivered on a Methanol-to-Propylene (MTP) project in Iran, as part of a contract signed in 2004 with Iran's Petrochemical Industries Design and Engineering Company (one of NIOC's major domestic contractors</p>	CalPERS followed up with Air Liquide in August 2010 to confirm the completion of its one major engineering project. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act due to the company completing its sole contract in the affected business operations by 2010.	913,851	\$119,497,386
2	Aker Solutions ASA (Norway)	<p>Norway's Aker Kvaerner Powergas provides refining facilities for Iranian petroleum. The company signed a USD 25 million contract with private Iranian engineering company Hirbodan in 2005 as the project manager for the offshore gas field South Pars Phases 9 and 10. The project was to last for approximately 10 years, employ 10 Aker Kvaerner staff and was Aker Kvaerner's first field development project in Iran, according to European financial newswire Hugin on April 27, 2005.</p> <p>Aker Kvaerner won a contract to develop Phases 15 and 16 of Iran's South Pars offshore gas field. Also, secured an order for six container ships from the Islamic Republic of Iran Shipping Lines. The company was also involved in a project building a dicalcium phosphate plant.</p>	Engagement with Aker in June 2010 confirmed that the company has minor business activities in Iran. These activities are conducted in accordance with applicable laws and regulations. Aker's investments in Iran are below the investment limit currently set at USD 20 million per year. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act	1,573,209	\$18,870,428

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3	<p>OAQ Gazprom</p> <p>(Russia)</p>	<p>Gazprom confirmed in a written communication to have been involved in the second and third phases of the South Pars gas field since 1997, with a total cost of \$2 billion, although reported up to USD 4 billion from international press reports. The project was complete and handed over to the National Iranian Oil company (NIOC), in 2004. Gazprom reported to be currently recovering costs.</p> <p>In March 2010, the company confirmed that in 2008 it signed a memorandum of understanding with the NIOC, to review oil and gas cooperation projects.</p>	<p>In November 2010, Company representatives stated to CalPERS that it is Gazprom's belief that the company is currently in compliance with international sanctions imposed in accordance with resolutions of the UN Security Council, Russian law, U.S. law and laws of jurisdictions where the company operates.</p> <p>Existing memorandums of understanding between Gazprom and the National Iranian Oil Company have either expired as recently as July 2010 or not been enacted upon – meaning the company has not taken any decision with respect to participation in any projects or performed any work in relation to implementation of any projects contemplated by the memorandum.</p> <p>In recent media articles dated August 2011, it has been reported that the Iran oil ministry official Hamin Karimi stated a consortium of Iranian companies will replace Gazprom in developing the Azar field. In October 2011, numerous media outlets reported due to sanction pressure and lack of completing the MOUs, Tehran has suspended Gazprom's gas contracts and replaced with a domestic company. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act.</p>	9,559,269	\$111,330,851

TABLE 3:
14 Companies Being Monitored

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
4	KunLun Energy Company (Formerly CNPC Hong Kong) (Hong Kong)	<p>CNPC Hong Kong announced its name change in KunLun Energy Company Limited (Kunlun) in February 2010. Kunlun is a publicly traded subsidiary of the state-owned China National Petroleum Corporation (Sinopec), which holds a 52.7 percent interest. It is assessed as tied to Iran because of its parent company's ties. Sinopec is deeply involved in Iran through oil exploration contracts and interests, refining, and commercialization of gas processing products. Kunlun has had a service contract for the Masjed Soleiman oilfields in Iran and has previously participated in the development of Block 11 of the South Pars gas field. Also, Kunlun is negotiating a seven-year contract to develop Block 14 of the South Pars gas field, which would give CNPC access to the estimated 370 billion cubic meters of gas reserves.</p> <p>In late July 2008, the Iranian government reached a USD100-billion-worth agreement with Sinopec, in which the firm agreed to purchase Iranian natural gas and help develop one of Iran's largest oil fields, according to an editorial in the Washington Times newspaper. In exchange, Tehran agreed to export 150,000 barrels of oil per day to China at "market prices." According to a ChinaDaily.com report in December 2007, the Iranian Oil Ministry awarded a USD2-billion contract for engineering services at the Yadavaran oilfield to Sinopec, along with 51 percent ownership of the project. This will be carried out in two subsequent phases of four and three years, respectively.</p>	CalPERS has no current investment position in KunLun Energy.	0	0
5	Man SE (Germany)	In its 2008 Annual Report, MAN Ferrostaal disclosed completion of a turnkey expansion of an 830 MW gas-steam power plant in Fajr, Iran, valued at EUR 75 million. Ferrostaal's Industrial Plants division also received orders for procurement packages from Kavian Petrochemical Company (a subsidiary of Bakhtar Petrochemicals, whose shareholders include Iran's National Petrochemical Company and Pension funds of Petroleum Ministry) for an olefin complex in Iran and the Iranian company PIDEK for use in Abadan refinery. Another Man subsidiary, Man Nutzfahrzeuge AG, sells vehicles in Iran, and Man's Turkish subsidiary also exports buses to Iran. In addition, MAN GHH Borsig, a company subsidiary in Iran, supplies various types of mining equipment to the Iranian mining industry.	In recent correspondence with Man SE dated June 2011, the Company confirmed that it does not have business activities subject to the divestment provisions of the Iran Act. In addition, Man SE has agreed to not pursue new business in Iran. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act.	195,924	\$17,514,173

TABLE 3:
14 Companies Being Monitored

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6	MISC Berhad (Malaysia)	MISC Berhad is the leading international shipping line of Malaysia. MISC Berhad operates a fleet of over 100 vessels, specializing in the shipping of energy products such as liquefied natural gas and petroleum (Company Website). MISC Berhad ships cargo to the Iranian port of Bandar Abbas, and describes its specific shipping policy for the port on its website. The company lists three other ports of call in Iran on its website - Asaluyeh, Bandar Mashahr, and Bandar Khomeini.	CalPERS has no current investment position in MISC Berhad.	0	0
7	Oil & Natural Gas Company (ONGC) (India)	According to media reports in 2011, Oil & Natural Gas Corp., have been exploring how to jointly develop energy resources with Iranian partners.	CalPERS has no current investment position in ONGC.	0	0
8	PetroChina (China)	According to Iranian news media dated September 4, 2011, PetroChina will invest \$8.4 billion to develop the Azadegan oilfield.	CalPERS has no current investment position in PetroChina.	0	0
9	Petrofac Limited (UK)	Petrofac Limited is involved in Iran through Petrofac Iran (PJSC) with an office in Teheran, as listed on its Web site as of September 2010. It is also active in the petroleum-related industry. In 2007, the company completed a three-year maintenance project in Iran for the South Pars Gas Company, a subsidiary of Iran's state-owned National Gas Company. This project, worth approximately USD 30 million, accounted for less than 1 percent of its 2007 revenues.	In December 2010, Petrofac responded to CalPERS informing us they have no ongoing operations in Iran. In addition, Petrofac has developed a policy of not working in Iran, nor, directly, or indirectly, for the benefit of Iranian entities. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act.	729,495	\$16,908,591

TABLE 3:
14 Companies Being Monitored

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
10	Petronas (Malaysia)	In a statement issued October 5, 2010, Datuk Shamsul Azhar Abbas CEO of Petroliaam Nasional Bhd (Petronas) said that the company has no intention of leaving Iran's market at the present time despite U.S. threats to punish companies continuing trade with the country.	CalPERS has no current investment position in Petronas.	0	0
11	Schlumberger (Netherlands)	<p>According to its website, Schlumberger has an office, Well Services of Iran Schlumberger Methods, in Tehran, Iran.</p> <p>A December 7, 2008, story from the Boston Globe newspaper reported that US oil-services firm Schlumberger Ltd. used a legal loophole to supply machines with radioactive chemicals to Iran. The Globe story said its investigation revealed the company sold a 2,000-pound drilling tool to Iran powered by a kind of radioactive chemical that scientists say could fuel a so-called 'dirty bomb'. US officials have sought to keep the chemical out of Iranian hands, but the sale was permitted under regulations allowing multinational corporations' foreign subsidiaries to engage in actions that would be illegal for their U.S. parent companies. Schlumberger acknowledges its drilling tool has been used in Iran, but a company spokesman pointed out in the Boston Globe story that the multinational followed "all applicable laws and regulations."</p> <p>Schlumberger sponsors a "Schlumberger Excellence in Educational Development, or SEED" program at a school for boys in Tehran, according to its website. SEED is a volunteer-based, non-profit education program focused on underserved communities where Schlumberger people live and work. SEED empowers employee-volunteers and educators-including teachers, parents and other mentors-to share their passion for learning and science with students aged 10-18.</p>	In correspondence from Schlumberger dated, November 2010, the Company decided not to pursue new bids or tenders for business in Iran. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act.	4,519,793	\$332,069,192

TABLE 3:
14 Companies Being Monitored

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
12	SGS SA (Switzerland)	<p>According to its website, SGS Iran is a member of the SGS group and has been present in Iran since 1976. SGS Iran was incorporated in January 1976 as a local company under the Iranian laws. The company is primarily involved in verification, testing and certification in a number of different sectors which include agriculture, oil & gas, automotive, environment, industrial, life science among others.</p> <p>SGS operations in Iran are limited and largely confined to the operations of its 50% subsidiary in Arya-SGS Quality Services, Private Joint Stock co., Teheran. This affiliate generated approximately CHF 29 million in revenue in 2009 and SGS Group generated CHF 4'7 billion. The bulk of SGS business in Iran is Industrial Services, Minerals and Oil, Gas & Chemicals, and Agricultural and Systems Certificates. The purpose of this service is to ensure proper quantity and quality of the goods.</p>	CalPERS initiated engagement with SGS in August 2010. Through subsequent engagement, the company stated that it does not inspect any arms or ammunition, nor does SGS provide any assistance to trade which might fund or otherwise facilitate terrorist activities. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act.	17,238	\$29,891,341
13	Technip (France)	In June 2008, Jam Petrochemical Complex, the world's biggest olefin complex, and Farsa-Shimi complex were commissioned in Assaluyeh, Iran. The major contractors of the project were the French Technip Company, the German Krupp Uhde Company, the Italian Technimont Company and Nargan and Sazeh companies from Iran. The project requires 25,000 tonnes of ethane, propane, butane, lighter products, raffinate, and heavier compounds which will be supplied from Pars Petrochemical, Borzuyeh and South Pars complexes. The project's products are used to feed lower units, in plastic and industrial parts production.	In correspondence with Technip dated November 2010, the Company demonstrated taking substantial action by not engaging in new projects going forward. Over the last five years, its activity has been limited to the completion of older projects. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act.	323,754	\$31,032,019

TABLE 3:
14 Companies Being Monitored

	<i>Company Name (Domicile)</i>	<i>Summary of Ties to Iran</i>	<i>Summary of Changes From 2010</i>	<i>Shares Held by CalPERS 10/31/2011</i>	<i>Market Value (\$) of Shares Held by CalPERS 10/31/2011</i>
14	TOYO Engineering Corporation (Japan)	As of September 2010, Toyo Engineering lists on its Web site to have an office in Tehran, Iran. According to its 2009 Annual Report, and as confirmed by the company in September 2010, Toyo in Iran works on a Gas Processing Plant EPC contract for Petropars Limited and has completed an ammonia plant for Petrochemical Industries Development Management Company of Iran. Toyo Engineering has emphasized that for all of these projects that it provides only engineering and construction services.	CalPERS initiated engagement with TOYO in June 2010. In correspondence dated August 2010, the company confirmed that it does not meet the criteria of the Iran Act because, firstly, TOYO's activities do not meet the applicable dollar threshold thereunder and, secondly, Toyo's activities do not fall into the "investment" defined thereunder. CalPERS has concluded that the Company is not subject to the divestment provisions of the Iran Act.	310,000	\$1,053,543
			Category Total:	18,142,533	\$677,769,524



Michael C. Schlachter, CFA
Managing Director & Principal
March 28, 2011

Mr. Eric Baggesen
Senior Investment Officer for Global Equities
California Public Employees' Retirement System
400 P Street
Sacramento, CA 95814

Re: Divestment Analysis – Sudan and Iran

Dear Eric,

This document responds to your request for an update of the our report detailing the impact of the contemplated divestment of Sudan and Iran-related securities.

Bear in mind that this paper does not pass judgment or comment on the political, social, health, or moral merits of any past, present, or contemplated future divestment activities, but simply calculates or estimates the gain or loss to the CalPERS investment portfolio of such activities.

Summary of Findings

In the pages that follow, we present detailed data and / or calculations to estimate the projected costs of the divestment of Sudan and Iran-related securities. This section presents a simplified summary of our results.

Projected Transactions Costs of Iran and Sudan Divestment

- High Estimate: -\$1,680,000
- Low Estimate: -\$420,000

Projected Annual Impact of Iran and Sudan Divestment / Exclusion (Assuming Optimized Reinvestment)

- 1 in 5 Years: ± \$769,000
- 1 in 10 Years: ± \$987,000
- 1 in 20 Years: ± \$1,176,000

Proposed Iran and Sudan Divestment

Wilshire calculated the costs and tracking error associated with the proposed divestment of Iran and Sudan-related securities. Based on work previously performed by Staff, 8 securities in 2010 were identified as having substantial Iran-related and/or

Sudan-related business activities. One security on the list was not in the unconstrained benchmark and two were not in the constrained benchmark.

Using index data as of December 31, 2010, Wilshire performed a variety of calculations, including the estimated transactions costs of divestment and reinvestment of proceeds, and the possible tracking error (excess risk) that may occur from excluding prohibited securities. All calculations were performed using Wilshire's Atlas GR6 global risk model, a software system that is generally recognized as an industry-leading risk calculation package.

FTSE currently creates for CalPERS a custom global equity benchmark that blends a custom FTSE index for non-US securities with a custom Wilshire 2500 index for US equities. This benchmark was used as a proxy for the complete global equity opportunity set.

We then calculated the fraction of the custom global index comprised by these 8 securities.

Analysis of Results – Global Equity Portfolio

We calculated that the 5 prohibited securities that were included in the current constrained benchmark comprise approximately 0.07% of the CalPERS benchmark (\$84 MM of a \$120B global benchmark).

Our analysis calculated that the projected tracking error of the global constrained (ex-tobacco, ex-KLD principles) benchmark versus the normal (unconstrained) FTSE index is 28.2 basis points. If the 8 securities on the Iran and Sudan lists are removed from the constrained portfolio, the projected tracking error versus the unconstrained benchmark increases 0.2 basis points to 28.4 basis points. We also calculated that the projected tracking error of the constrained portfolio less the 8 securities versus the constrained portfolio is 1.5 basis points.

The 0.2bp of incremental projected tracking error versus the unconstrained benchmark or the 1.5bp of projected tracking error for the constrained benchmark versus itself less divested securities are within the margin of error for the ordinary management of an index fund and do not pose a significant risk to the portfolio if they are divested.

In the above analyses, we assumed that any proceeds from divested securities were reinvested pro-rata in the remaining securities in the benchmark. The calculation of 1.5 basis points of incremental tracking error means that in approximately 2 out of 3 years, the performance of the portfolio relative to the benchmark will not vary by greater than 0.015% solely as a result of these exclusions. On a base of \$120B, the risk to the portfolio is expected to lead to a performance discrepancy versus a benchmark containing the 8 securities of greater than:

- \$23.1 million 1 out of every 5 years (1.282 standard deviations)
- \$29.6 million 1 out of every 10 years (1.645 standard deviations)
- \$35.3 million 1 out of every 20 years (1.960 standard deviations)

Analysis of Results – Non-US Equity Portfolio

We also were asked to re-optimize the portfolio, reinvesting the proceeds from the divested securities into other securities that are sufficiently similar to the divested securities that the purchases will decrease the impact of the divestment. Due to the limitations of the optimization software (there are approximately 900 securities more in the unconstrained benchmark than the optimizer can handle), we were not able to run a full optimization on the entire global portfolio. As a result, we split the Global portfolio into US and non-US components and recalculated the divestment impacts and optimization results on the non-US portion of the portfolio.

For the non-US portfolio, if the divested securities are reinvested pro-rata back into the portfolio, we found that the projected tracking error of the non-US constrained (ex-tobacco, ex-KLD principles) benchmark versus the normal (unconstrained) FTSE non-US index is 45.8 basis points. If the 8 securities on the Iran and Sudan lists are removed from the constrained portfolio, the projected tracking error versus the unconstrained benchmark remains unchanged at 45.8 basis points, indicating that there is no incremental tracking error versus the unconstrained benchmark resulting from divestment of these securities.

We also calculated that the projected tracking error of the constrained benchmark versus the constrained benchmark less the 8 divested securities is 2.7 basis points, indicating that there is a slight contribution to risk from divestment, but that risk is still within the margin of error in the ordinary operation of an index fund. The calculation of 2.7 basis points of incremental tracking error means that in approximately 2 out of 3 years, the performance of the portfolio relative to the benchmark will not vary by greater than 0.027% solely as a result of these exclusions. On a base of \$60B, the risk to the portfolio is expected to lead to a performance discrepancy versus a benchmark containing the 8 securities of greater than:

- \$20.8 million 1 out of every 5 years (1.282 standard deviations)
- \$26.6 million 1 out of every 10 years (1.645 standard deviations)
- \$31.8 million 1 out of every 20 years (1.960 standard deviations)

We then re-optimized the portfolio to reinvest the proceeds from the 8 divested securities in such a manner as to reduce incremental tracking error as much as possible, generally by replacing the divested securities with others that have very similar characteristics. We found that the projected tracking error of the optimized non-US constrained (ex-tobacco, ex-KLD principles) benchmark versus the normal (unconstrained) FTSE non-US index is 16.2 basis points. If the 8 securities on the Iran and Sudan lists are removed from the constrained portfolio and the constrained portfolio is re-optimized to minimize the absence of all divested and constrained securities, the

projected tracking error versus the unconstrained benchmark remains virtually unchanged at 16.3 basis points, indicating that there is virtually no incremental tracking error versus the unconstrained benchmark resulting from divestment of these securities in a re-optimized portfolio.

The 0.1 basis point increase in tracking error for the constrained benchmark versus the unconstrained benchmark less the 8 divested securities means that in approximately 2 out of 3 years, the performance of the portfolio relative to the benchmark will not vary by greater than 0.001% solely as a result of these exclusions. On a base of \$60B, the risk to the portfolio is expected to lead to a performance discrepancy versus a benchmark containing the 8 securities of greater than:

- \$769,000 in 1 out of every 5 years (1.282 standard deviations)
- \$987,000 in 1 out of every 10 years (1.645 standard deviations)
- \$1,176,000 in 1 out of every 20 years (1.960 standard deviations)

In allowing for optimal reinvestment, the above optimization achieved a 2.6 basis-point reduction in expected tracking error versus the proportional reinvestment case (from 0.027% to 0.001% TE). This appears to be the result of the large number of securities in the custom benchmark (9,000+) and the relatively small exposure (0.07%) to restricted securities.

In order to optimize the portfolio as described above, the following trades are required:

- Sales: 7 securities totaling \$84 million (7 basis points of \$120BN)
- Purchases: various securities totaling \$84 million to reinvest proceeds
- Total: \$168 million worth of transactions

At the levels of assumed total transaction costs specified below (commission, spread, market impact), the expected cost of the required transactions would be as listed (note: the 0.50% cost estimate is likely the most representative of the average cost for purchases and sales, as the cost to purchase is expected to be near the 0.25% level, while the cost to sell restricted securities is more likely to be at the higher 1% level. If liquidations were required to occur quickly – i.e. in a single day – the costs of sales would likely be higher than 1%, making the overall roundtrip cost estimate more likely to migrate towards the 1% figures shown below):

- At 0.25% cost (conservative for non-US securities), the total expected cost would be \$420,000.
- At 0.50% cost (moderate for non-US securities), the total expected cost would be \$840,000.

- At 1.00% cost (realistic for illiquid non-US securities), the total expected cost would be \$1.68 million.

Conclusion

The generally accepted academic argument is that limiting the opportunity set for investments has a deleterious impact on performance over long periods of time. Over a market cycle, a portfolio that can choose from all 500 stocks in the S&P 500 should outperform one that can only select from 450 stocks. The analyses contained in this report generally confirm the argument that divested portfolios present more risk of over or underperformance versus a benchmark than does an all-inclusive index fund..

Any investor who wishes to divest from certain securities or exclude certain securities should therefore weigh the political, social, or moral benefits of such exclusions against the possible cost of owning a suboptimal portfolio.

If you have any additional questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Schlachter", with a long horizontal flourish extending to the right.

Michael C. Schlachter, CFA

Appendix A:

Definitions

“Authorized business operations” – A United States company that is authorized by the federal government to have business operations in Iran.

“Board” – The Board of Administration of the Public Employees’ Retirement System or the Teachers’ Retirement Board of the State Teacher’ Retirement System, as applicable.

“Business operations” – The company (A) is invested in or engaged in business operations with entities in the defense or nuclear sectors of Iran or (B) is invested in or engaged in business operations with entities involved in the development of petroleum or natural gas resources of Iran, and that company is subject to sanctions under Public Law 104-172 (any entity that has invested at least \$20 million in any year since 1996 to develop petroleum or natural gas resources of Iran), as renewed and amended in 2001 and 2006.

“Humanitarian Activity” – A company primarily engaged in supplying goods or services intended to relieve human suffering in Iran or a company that promotes health, education, or journalistic, religious, or welfare activities in Iran.

“Substantial action” – A boycott of the government of Iran, curtailing business in Iran or selling company assets, equipment or real and personal property located in Iran.

Appendix B:

Requirements

The implementation steps and requirements specified within the Iran Act are:

1. Identification of companies, through publicly available information, with activities in the specified areas.
2. Notification to such companies that their activities may make them subject to divestment unless they take “substantial action” within 90 days.
3. Determination by June 30, 2008 which companies may be subject to “divestment” due to lack of “substantial action” or progress toward it, or are subject to exemption from the divestment provisions due to humanitarian activities.
4. Monitor and review companies making sufficient progress toward “substantial action” for up to 12 months from the initial notification.
5. Determination: Upon determination that a company is subject to “divestment”, making no further investments into such company.
6. Fiduciary analysis to determine that actions to be taken are consistent with the boards’ fiduciary responsibilities as established in the “California Constitution, article 16, section 17”.
7. Liquidation within 18 months of investments determined to be subject to “divestment”.
8. Report annually (beginning January 1, 2009) to the California Legislature regarding the status of CalPERS compliance with the Iran Act.